

## CLAIMS

1. A bending device comprising:  
a ram start-up means provided so as to be movable in the left-right direction; and  
a control means for moving the ram start-up means to a point in front of a positioning point of a workpiece at each bending sequence.
  
2. The bending device according to claim 1, wherein the positioning point of the workpiece is an intermediate point in the left-right direction between positions of striking blocks constituting a back gauge.
  
3. A bending device comprising:  
a ram start-up means provided so as to be movable in the left-right direction;  
a foreign object detecting means for detecting the entry of a foreign object into a region of movement of the ram start-up means; and  
a control means for preventing the ram start-up means from moving when the entry of the foreign object is detected.
  
4. The bending device according to claim 3, wherein the foreign object detecting means comprises a light emitter and a light receiving element, and when a ray of light from the light emitter is blocked, the entry of the foreign object

is detected.

5. The bending device according to claim 1 or 3, wherein the ram start-up means comprises a foot switch or a two-hand operating device.

6. The bending device of claim 5, in which a transfer mechanism of the ram start-up means comprises a guiding mechanism and a driving mechanism, wherein the guiding mechanism comprising a guide provided in the left-right direction and a roller being rotatably provided on the side of the ram start-up means and slidably attached to the guide, and the driving mechanism comprising a driving pulley and an idler pulley provided on both ends of the guide and a timing belt toroidally provided around the pulleys and being fixed on the side of the ram start-up means.

7. A bending device comprising:  
a ram start-up means provided so as to be movable in the left-right direction;  
an input part for inputting product information;  
a bending sequence determining part for determining a bending sequence of a workpiece based on the product information;  
a die determining part for determining a die bending the workpiece and a die layout at each bending;  
a striking point determining part for determining a point

of a striking block in the left-right direction based on the bending sequence, the die and the die layout; and a ram start-up means point determining part for determining a point of the ram start-up means in the left-right direction within a range of a striking block width procured from one or more of the striking blocks based on the determined point of the striking block in the left-right direction.

8. The bending device according to claim 7, wherein the ram start-up means point determining part determines a substantially intermediate point of a striking block width procured from one or more striking blocks as the point of the ram start-up means in the left-right direction.

9. The bending device according to claim 7 or 8, wherein the ram start-up means comprises a foot switch or a two-hand control device.

10. The bending device according to claim 7 or 8, wherein, when the ram start-up means actually moves to a point different from a pre-determined point determined by the ram start-up means point determining part, the actual moving point is determined as a final point of the ram start-up means.

11. The bending device according to claim 7 or 9, wherein

the final position of the ram start-up means is saved in a control device when an ON signal is output from the ram start-up means.

12. A bending device comprising:

a ram start-up means provided so as to be movable in the left-right direction;

a striking point determining part for determining a point of a striking block in the left-right direction based on a bending sequence, a die and a die layout decided by a worker according to product information; and

a ram start-up means point determining part for determining a point of the ram start-up means in the right-left direction within a range of a striking block width procured from one or more of the striking blocks based on the point of the striking block in the right-left direction.

13. The bending device of claim 12, wherein the ram start-up means point determining part determines a point where the ram start-up means is actually positioned as the point of the ram start-up means in the left-right direction, and saves the point in a control device.